

IN THE CLAIMS:

1-7. (Canceled)

8. (Currently amended) ~~The method of claim 1,~~ A method of workload management in a data processing system, comprising:

classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

performing workload management with respect to classes in other tiers based on priorities of the tiers; and

performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the at least some processes, wherein performing workload management with respect to other classes within a same tier comprises determining a percentage goal for the process as a function of a number of system resource shares associated with the class in which the process is classified divided by a total number of shares allocated to active classes in the same tier as the class in which the process is classified.

9-11. (Canceled)

12. (Original) The method of claim 8, wherein if the percentage goal is below a minimum resource usage limit, the class is favored for additional usage of the system resource, and wherein if the calculated percentage goal is above a maximum resource usage limit, the class is not favored for additional usage of the system resource.

13. (Original) The method of claim 12, wherein the minimum resource usage limit and maximum resource usage limit are retrieved from a share/tier profile storage.

14-17. (Canceled)

18. (Currently amended) ~~The method of claim 17,~~ A method of workload management in a data processing system, comprising:

classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

performing workload management with respect to classes in other tiers based on priorities of the tiers;

performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the at least some processes, wherein performing workload management with respect to other classes within the same tier comprises determining a resource allocation priority range for the class based on a minimum resource usage limit, a maximum resource usage limit, and a resource usage goal; and

adjusting a priority of the class by a class priority adjustment value, the class priority adjustment value being determined based on a comparison of actual resource usage to the minimum resource usage limit, the maximum resource usage limit, and a resource usage goal, wherein if the actual resource usage is between the maximum resource usage limit and an absolute maximum resource usage limit, the class priority adjustment is set to disfavor the class from being allocated additional amounts of the resource.

19. (Currently amended) ~~The method of claim 17,~~ A method of workload management in a data processing system, comprising:

classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

performing workload management with respect to classes in other tiers based on priorities of the tiers;

performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system

resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the at least some processes, wherein performing workload management with respect to other classes within the same tier comprises determining a resource allocation priority range for the class based on a minimum resource usage limit, a maximum resource usage limit, and a resource usage goal; and

adjusting a priority of the class by a class priority adjustment value, the class priority adjustment value being determined based on a comparison of actual resource usage to the minimum resource usage limit, the maximum resource usage limit, and a resource usage goal, wherein if the actual resource usage is between the resource usage goal and the maximum resource usage limit and a difference between an average resource usage over a specified time interval and a resource usage for a last predetermined time increment is less than zero, the class priority adjustment is not changed.

20. (Currently amended) ~~The method of claim 17,~~ A method of workload management in a data processing system, comprising:

classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

performing workload management with respect to classes in other tiers based on priorities of the tiers;

performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the at least some processes, wherein performing workload management with respect to other classes within the same tier comprises determining a resource allocation priority range for the class based on a minimum resource usage limit, a maximum resource usage limit, and a resource usage goal; and

adjusting a priority of the class by a class priority adjustment value, the class priority adjustment value being determined based on a comparison of actual resource usage to the minimum resource usage limit, the maximum resource usage limit, and a

resource usage goal, wherein if the actual resource usage is between the minimum resource usage limit and the resource usage goal and a difference between an average resource usage over a specified time interval and a resource usage for a last predetermined time increment is greater than zero, the class priority adjustment is incremented by a function of the difference.

21. (Currently amended) ~~The method of claim 17,~~ A method of workload management in a data processing system, comprising:

classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

performing workload management with respect to classes in other tiers based on priorities of the tiers;

performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the at least some processes, wherein performing workload management with respect to other classes within the same tier comprises determining a resource allocation priority range for the class based on a minimum resource usage limit, a maximum resource usage limit, and a resource usage goal; and

adjusting a priority of the class by a class priority adjustment value, the class priority adjustment value being determined based on a comparison of actual resource usage to the minimum resource usage limit, the maximum resource usage limit, and a resource usage goal, wherein if the actual resource usage is below the resource usage goal and the difference between an average resource usage over a specified time interval and a resource usage for a last predetermined time increment is greater than zero, the class priority adjustment is not changed.

22. (Currently amended) ~~The method of claim 17,~~ A method of workload management in a data processing system, comprising:

classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

performing workload management with respect to classes in other tiers based on priorities of the tiers;

performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the at least some processes, wherein performing workload management with respect to other classes within the same tier comprises determining a resource allocation priority range for the class based on a minimum resource usage limit, a maximum resource usage limit, and a resource usage goal; and

adjusting a priority of the class by a class priority adjustment value, the class priority adjustment value being determined based on a comparison of actual resource usage to the minimum resource usage limit, the maximum resource usage limit, and a resource usage goal, wherein if the actual resource usage is below the resource usage goal and the difference between an average resource usage over a specified time interval and a resource usage for a last predetermined time increment is less than or equal to zero, the class priority adjustment is decremented by a function of the difference.

23. (Currently amended) ~~The method of claim 7,~~ A method of workload management in a data processing system, comprising:

classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

performing workload management with respect to classes in other tiers based on priorities of the tiers, wherein the system resource tiers are organized hierarchically by priority; and

performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the

at least some processes, wherein processes in classes in lower priority tiers are only able to obtain access to a resource if processes in classes in higher priority tiers do not use all of the resource or if the processes in each of the classes in the higher priority tier have reached an absolute maximum resource usage limit.

24-30. (Canceled)

31. (Currently amended) ~~The computer program product of claim 24,~~ A computer program product in a computer readable medium for workload management in a data processing system, comprising:

first instructions for classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

second instructions for performing workload management with respect to classes in other tiers based on priorities of the tiers; and

third instructions for performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the at least some processes, wherein the third instructions for performing workload management with respect to other classes within a same tier comprises instructions for determining a percentage goal for the process as a function of a number of system resource shares associated with the class in which the process is classified divided by a total number of shares allocated to active classes in the same tier as the class in which the process is classified.

32-34. (Canceled)

35. (Original) The computer program product of claim 31, wherein if the percentage goal is below a minimum resource usage limit, the class is favored for additional usage of

the system resource, and wherein if the calculated percentage goal is above a maximum resource usage limit, the class is not favored for additional usage of the system resource.

36. (Original) The computer program product of claim 35, wherein the minimum resource usage limit and maximum resource usage limit are retrieved from a share/tier profile storage.

37-40. (Canceled)

41. (Currently amended) ~~The computer program product of claim 40,~~ A computer program product in a computer readable medium for workload management in a data processing system, comprising:

first instructions for classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

second instructions for performing workload management with respect to classes in other tiers based on priorities of the tiers;

third instructions for performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the at least some processes, wherein the third instructions for performing workload management with respect to other classes within the same tier comprises instructions for determining a resource allocation priority range for the class based on a minimum resource usage limit, a maximum resource usage limit, and a resource usage goal; and

fourth instructions for adjusting a priority of the class by a class priority adjustment value, the class priority adjustment value being determined based on a comparison of actual resource usage to the minimum resource usage limit, the maximum resource usage limit, and a resource usage goal, wherein if the actual resource usage is

between the maximum resource usage limit and an absolute maximum resource usage limit, the class priority adjustment is set to disfavor the class from being allocated additional amounts of the resource.

42-45. (Canceled)

46. (Currently amended) ~~The computer program product of claim 30,~~ A computer program product in a computer readable medium for workload management in a data processing system, comprising:

first instructions for classifying a process into a class of a plurality of predefined classes, each of the plurality of predefined classes having corresponding system resource shares and a tier;

second instructions for performing workload management with respect to classes in other tiers based on priorities of the tiers, wherein the system resource tiers are organized hierarchically by priority;

third instructions for performing workload management with respect to other classes within a same tier as the class into which the process is classified, based on the corresponding system resource shares of the class and of the other classes, such that at least some of the processes within a same tier concurrently share system resources during execution of the at least some processes, wherein processes in classes in lower priority tiers are only able to obtain access to a resource if processes in classes in higher priority tiers do not use all of the resource or if the processes in each of the classes in the higher priority tier have reached an absolute maximum resource usage limit.

47-50. (Canceled)